

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

To:

see form PCT/ISA/220

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/GB2004/001381

International filing date (day/month/year)  
01.04.2004

Priority date (day/month/year)  
17.04.2003

International Patent Classification (IPC) or both national classification and IPC  
B41M5/00

Applicant  
EASTMAN KODAK COMPANY

**1. This opinion contains indications relating to the following items:**

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA:



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10/553341

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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**International application No.  
PCT/GB2004/001381

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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☐ in written format
    - ☐ in computer readable form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in computer readable form.
    - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
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**Box No. II Priority**

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1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

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**Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-27
Inventive step (IS)	Yes: Claims	
	No: Claims	1-27
Industrial applicability (IA)	Yes: Claims	1-27
	No: Claims	

2. Citations and explanations

**see separate sheet**

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/GB2004/001381

**Re Item V.**

- 1 The following documents are referred to in this communication:  
D1 : US 2002/149656 A1 (R.S.NOHR ET AL.) 17 October 2002 (2002-10-17)  
D2 : EP 1 153 757 A (STORA ENSO NORTH AMERICA CORPORATION) 14  
November 2001 (2001-11-14)
- 2 The present application does not meet the criteria of Article 33(1) PCT, because  
the subject-matter of Claims 1-27 is not new in the sense of Article 33(2) PCT:
  - 2.1 Document D1 discloses (the references in parenthesis applying to this document)  
an ink-jet recording element comprising a support having thereon an image-  
receiving layer, said ink-receptor layer containing colloidal organic or inorganic  
particles having a charged surface and having associated therewith two polymers  
having ionised groups thereon (see Figure 2), wherein one of these polymers has  
ionised groups of opposite charge to that of the surface of the colloidal particles  
and the other polymer has ionised groups having the same charge as the surface  
of the colloidal particles (see paragraphs 2, 18, 21, 24-26, 43, 44; Table 1);  
paragraph 18 of document D1 explicitly states that "the nanoparticles are effective  
in coatings for paper products and textiles" and these coated papers would be  
suitable for use as ink-jet ink-receptor sheets (cf. Claim 1 of the present case).

In addition, document D1 describes a method of coating a substrate comprising  
the steps of:

- (a) providing colloidal particles having a charged surface;
- (b) combining the colloidal particles with two polymers having ionised groups  
(see Figure 2), wherein one of these polymers has ionised groups of  
opposite charge to that of the surface of the colloidal particles and the other  
polymer has ionised groups having the same charge as the surface of the colloidal  
particles to provide a coatable formulation;
- (c) applying the formulation to the substrate to form a coating thereon, and
- (d) drying the resulting coating (see the Examples together with paragraphs 2,  
18, 21, 24-26, 43, 44; Table 1) (cf. present independent Claim 19).

Document D1 also teaches the use of the colloidal particles as defined in any of  
Claims 2-7 and the two polymers as defined in any of Claims 8-14 to provide an  
ink-jet element as defined in Claim 1, providing improved image stability and

drying time (see paragraph 12 in combination with the passages previously mentioned, the Examples, and the Abstract which mentions solving exactly the same problems) (cf. present independent Claim 26).

Document D1 furthermore, at least implicitly, discloses an ink-jet printing method comprising the following steps:

- (a) providing an ink-jet printer that is responsive to digital data signals;
- (b) loading the printer with an ink-jet recording element as previously defined in any one of Claims 1 to 18;
- (c) loading the printer with an ink-jet ink composition; and
- (d) printing on the ink-jet recording element using the ink-jet ink composition in response to the digital data signals (these procedural steps are standard practice in the art of ink-jet printing, see the Examples) (cf. present independent Claim 27).

Document D1 also, either explicitly or implicitly, discloses the subject-matter of the dependent Claims 2 to 18 and 20 to 25, which relate to further embodiments of the subject-matter of independent Claims 1 and 19, respectively (see the passages mentioned above and cited in the International Search Report).

2.2 Document D2 similarly discloses the subject-matter of Claims 1 to 27 (see the passages cited in the International Search Report).

**Therefore, the present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of Claims 1-27 is not novel in the sense of Article 33(2) PCT.**